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Abstract

Comb filter arrangement for decimating a sequence of digital input values into a sequence of digital output values by a non-integral factor

The comb filter arrangement has an input-end integrator (10) of the n-th order whose output is fed to at least three signal paths (20, 30, 40). Each signal path (20, 30, 40) is provided by means of a control device (100) with an adjustable delay stage (22, 32, 42), a following decimator stage (24, 34, 44) and an output-end differentiator stage (26, 36, 46). The outputs of the three signal paths (20, 30, 40) are fed to an interpolation arrangement (60) at whose output the decimated sequence of digital output values ($y_j$) can be tapped. The interpolation arrangement (60) always interpolates between only two values ($y_i$, $y_{i+k}$; $y_{i+k}$, $y_{i+2k}$).

Figure 2